

POWER OF ATTORNEY

Qualcomm Atheros, Inc. ("assignee"), a Delaware corporation having a place of business at 1700 Technology Drive, San Jose, CA 95110, certifies that to the best of assignee's knowledge and belief it is the assignee of the entire right, title, and interest in and to the patents or patent applications listed on the attached Appendix A and represents that the undersigned is a representative authorized and empowered to sign on behalf of the assignee.

Assignee's ownership of the patents or patent applications listed on the attached Appendix A is indicated either by 1) the assignment(s) recorded with the U.S. Patent and Trademark Office at the reel and frame numbers listed on Appendix A or 2) Assignee's assertion that Assignee has reviewed the assignment documents that evidence the placement of title in the assignee, true and correct copies of which are attached hereto, and understands and believes that these assignment documents have been submitted for recordation in the U.S. Patent and Trademark Office.

Pursuant to 37 C.F.R. §§1.36 and 3.71, the assignee hereby revokes all powers of attorney previously given and appoints the following attorneys and/or agents in connection with the patent applications and patents identified in Appendix A, that are filed with the United States Patent and Trademark Office: **the practitioners at Customer Number 88433**, *each of said attorneys or agents either being employed by Qualcomm Atheros, Inc. or being a member or an associate of the firm of Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C.*, as its attorney or agent for so long as they remain with such company or firm, with full power of substitution and revocation, to prosecute the application, to make alterations and amendments therein, to transact all business in the Patent and Trademark Office in connection therewith, and to receive any Letters Patent, and for one year after issuance of such Letters Patent to file any request for a certificate of correction that may be deemed appropriate.

Pursuant to 37 C.F.R. §3.71, the assignee hereby states that prosecution of the patents or patent applications listed on the attached Appendix A are to be conducted to the exclusion of the inventor(s).

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APPENDIX A

MHKKG Reference Number	Client Reference Number	Filing Date/Issue Date	Serial No./Patent No.	Title	Inventor(s)	Assignment Recordation Ref/Frame Nos.
6221-03800	ATH-0506	8/29/2000	6,111,919	Synchronization of OFDM Signals	Lawrence W. Yonge, III	009918/0489 014532/0655 024103/0834 024103/0872 026596/0214
6221-03900	ATH-0507	8/21/2001	6,278,685	Robust Transmission Mode	Lawrence W. Yonge, III Bart W. Blanchard Harper Brent Mashburn	010253/0829 014532/0655 024103/0834 024103/0872 026596/0214
6221-04000	ATH-0517	6/10/2003	6,577,630	Self-Configuring Source-Aware Bridging for Noisy Media	Brian E. Markwalter Stanley J. Kostoff, II	011318/0577 014532/0655 024103/0834 024103/0872 026596/0214
6221-04100	ATH-0520	6/14/2005	6,907,044	Method and Protocol to Support Contention-Free Intervals and QoS in a CSMA Network	Lawrence W. Yonge, III Brian E. Markwalter Stanley J. Kostoff, II James Philip Patella William E. Earnshaw	011296/0641 014532/0655 024103/0834 024103/0872 026596/0214
6221-04200	ATH-0529	11/24/2003	10/720,742	Medium Access Control Layer that Encapsulates Data from a Plurality of Received Data Units into a Plurality of Independently Transmittable Blocks	Lawrence W. Yonge, III Srinivas Katar Stanley J. Kostoff, II William E. Earnshaw Bart W. Blanchard Timothy R. Gargrave	015204/0294 024103/0834 024103/0872 026596/0214
6221-04208	ATH-0529-1C	2/11/2011	13/025,230	Medium Access Control Layer that Encapsulates Data from a Plurality of Received Data Units into a Plurality of Independently Transmittable Blocks (Continuation)	Lawrence W. Yonge, III Srinivas Katar Stanley J. Kostoff, II William E. Earnshaw Bart W. Blanchard Timothy R. Gargrave	025984/0845 025984/0867 025984/0951 026596/0214
6221-04300	ATH-0532	5/11/2010	7,715,425	Channel Adaptation Synchronized to Periodically Varying Channel	Lawrence W. Yonge, III Srinivas Katar Stanley J. Kostoff, II William E. Earnshaw Bart W. Blanchard Hassan Kaywan Afkhamie Harper Brent Mashburn	014867/0350 024103/0834 024103/0872 026596/0214
6221-04400	ATH-0538	3/20/2003	10/391,776	Method and Apparatus for Selecting a Responder to Enable Reliable Multicast	Bradley (Robert) Lynch Christopher Green	013898/0430 014375/0510 024103/0834 024103/0872 026596/0214
6221-04500	ATH-0539	9/15/2009	7,590,183	Generating Signals for Transmission of Information	Lawrence W. Yonge, III Timothy J. Vandermeij	016997/0499 024103/0834 024103/0872 026596/0214
6221-04501	ATH-0539-1C	8/5/2009	12/536,263	Generating Signals for Transmission of Information (Continuation)	Lawrence W. Yonge, III Timothy J. Vandermeij	023063/0310 024103/0834 024103/0872 026596/0214

6221-04600	ATH-0540	9/22/2009	7,592,880	Communicating over Coaxial Cable Networks	Gregory Allen Magin	016673/0202 024103/0834 024103/0872 026596/0214
6221-04605	ATH-0540-1C	8/13/2009	12/540,521	Communicating over Coaxial Cable Networks (Continuation)	Gregory Allen Magin	023170/0047 024103/0834 024103/0872 026596/0214
6221-04700	ATH-0543(PRV)	8/2/2005	60/705,720	Communicating in a Network that Includes a Medium having Varying Transmission Characteristics (Provisional)	Lawrence W. Yonge, III Srinivas Katar Timothy J. Vandermeij James E. Petranovich Neal K. Riedel Sherman Leon Gavette Wai Chung Chan Min Wang Deepak Ayyagari	
6221-04701	ATH-0543	6/1/2010	7,729,372	Communicating in a Network that Includes a Medium having Varying Transmission Characteristics	Lawrence W. Yonge, III Srinivas Katar James E. Petranovich Neal (K.) Riedel George M. Peponides Wai Chung Chan	018261/0958 018261/0603 018261/0569 022305/0837 024103/0834 024103/0872 026596/0214
6221-04706	ATH-0543-1C	12/1/2009	12/628,507	Communicating in a Network that Includes a Medium Having Varying Transmission Characteristics (Continuation)	Lawrence W. Yonge, III Srinivas Katar James E. Petranovich Neal (K.) Riedel George M. Peponides Wai Chung Chan	023663/0670 023663/0691 023663/0705 023678/0634 024103/0834 024103/0872 026596/0214
6221-04800	ATH-0543-1(PRV)	7/27/2005	60/702,717	Powerline Network Management and Control (Provisional)	Yiorgos M. Peponides Neal (K.) Riedel James E. Petranovich Lawrence W. Y onge Srinivas Katar Deepak Ayyagari Sherman L. Gavette Wai Chung (Tony) Chan	
6221-04900	ATH-0544	10/26/2010	7,822,059	Managing Contention-Free Time Allocations in a Network	Srinivas Katar Lawrence W. Yonge, III Neal K. Riedel Min Wang George M. Peponides Wai Chung Chan Sherman Leon Gavette Deepak Ayyagari	018261/0455 018261/0933 018261/0478 018261/0556 022305/0837 024103/0834 024103/0872 026596/0214
6221-05000	ATH-0545-1P	3/23/2010	7,684,568	Encrypting Data in a Communication Network (Continuation-in-Part)	Lawrence W. Yonge, III Srinivas Katar	018575/0636 024103/0834 024103/0872 026596/0214
6221-05100	ATH-0547	7/26/2006	11/493,382	Managing Spectra of Modulated Signals in a Communication Network	Lawrence W. Yonge, III	018596/0327 024103/0834 024103/0872 026596/0214
6221-05300	ATH-0549(PRV)	3/7/2006	60/780,132	Establishing Shared Information in a Network (Provisional)	Richard E. Newman Lawrence W. Yonge III	021521/0389 024103/0834 024103/0872 026596/0214

6221-05301	ATH-0549	2/16/2010	7,664,955	Establishing Shared Information in a Network	Richard E. Newman Lawrence W. Yonge III	021521/0389 024103/0834 024103/0872 026596/0214
6221-05302	ATH-0549F1	3/7/2007	PCT/US2007/063472	Establishing Shared Information in a Network	Richard E. Newman Lawrence W. Yonge III	021521/0389 024103/0834 024103/0872 026596/0214
6221-05303	ATH-0549-1C	12/23/2009	12/645,971	Establishing Shared Information in a Network (Continuation)	Richard E. Newman Lawrence W. Yonge III	021521/0389 024103/0834 024103/0872 026596/0214
6221-05400	ATH-0550	3/8/2011	7,904,021	Selecting Carriers for Modulating Signals in a Communication Network	Lawrence W Yonge	019467/0628 024103/0834 024103/0872 026596/0214
6221-05500	ATH-0551(PRV)	12/18/2007	61/014,631	Managing Communications Over a Shared Medium (Provisional)	Michael Ryan Maulik Bhatt Stanley J. Kostoff II Trecina Cresse William E. Earnshaw	022014/0296 024103/0834 024103/0872 026596/0214
6221-05501	ATH-0551	12/17/2008	12/337,009	Managing Communications Over a Shared Medium	Michael Ryan Maulik Bhatt Stanley J. Kostoff II Trecina Cresse William E. Earnshaw	022014/0296 024103/0834 024103/0872 026596/0214
6221-05502	ATH-0551F1	12/18/2008	PCT/US2008/087454	Managing Communications Over a Shared Medium	Michael Ryan Maulik Bhatt Stanley J. Kostoff II Trecina Cresse William E. Earnshaw	022014/0296 024103/0834 024103/0872 026596/0214
6221-05600	ATH-0552(PRV)	5/10/2007	60/917,232	Managing Distributed Access to a Shared Medium (Provisional)	Srinivas Katar Lawrence W. Yonge III Manjunath Krishnam Bradley Robert Lynch	021348/0196 024103/0834 024103/0872 026596/0214
6221-05601	ATH-0552	5/9/2008	12/118,613	Managing Distributed Access to a Shared Medium	Srinivas Katar Lawrence W. Yonge III Manjunath Krishnam Bradley Robert Lynch Ehab Tahir	021348/0196 024103/0834 024103/0872 026596/0214
6221-05700	ATH-0553(PRV)	6/4/2007	60/941,949	Managing Communications Over a Shared Medium (Provisional)	Lawrence W. Yonge III Srinivas Katar Manjunath Krishnam	
6221-05800	ATH-0554	6/4/2008	12/133,270	Distributed Scheduling	Lawrence W. Yonge, III Srinivas Katar Shmuel Goldfisher Erez Geva	023559/0843 023543/0275 024103/0834 024103/0872 026596/0214
6221-05900	ATH-0555	6/4/2008	12/133,315	Contention Groups for Hidden Nodes	Lawrence W. Yonge III Srinivas Katar Manjunath Krishnam	021982/0895 024103/0834 024103/0872 026596/0214
6221-06000	ATH-0556	5/24/2011	7,949,356	Clock Synchronization Over a Shared Medium	Lawrence W. Yonge III Srinivas Katar Manjunath Krishnam	021982/0572 024103/0834 024103/0872 026596/0214
6221-06100	ATH-0557	7/13/2010	7,756,039	Data Plane Aggregation Based on Route and Service Type	Lawrence W. Yonge III Srinivas Katar Manjunath Krishnam	021811/0417 024103/0834 024103/0872 026596/0214

6221-06200	ATH-0558	4/23/2008	12/108,334	Method of Routing Traffic in a Network	Lawrence W. Yonge III Srinivas Katar Manjunath Krishnam	020943/0235 024103/0834 024103/0872 026596/0214
6221-06300	ATH-0559	6/4/2008	12/133,301	Retransmission of Broadcast and Multicast Traffic Over a Shared Medium	Lawrence W. Yonge, III Srinivas Katar	021545/0461 024103/0834 024103/0872 026596/0214
6221-06400	ATH-0560	1/7/2008	11/970,271	Authorizing Customer Premise Equipment into a Network	Lawrence W. Yonge III Srinivas Katar Manjunath Krishnam	020466/0216 024103/0834 024103/0872 026596/0214
6221-06500	ATH-0561	1/7/2008	11/970,297	Authorizing Stations into a Centrally Managed Network	Lawrence W. Yonge III Srinivas Katar Manjunath Krishnam	020517/0990 024103/0834 024103/0872 026596/0214
6221-06600	ATH-0562	1/7/2008	11/970,323	Authorizing Customer Premise Equipment on a Sub-Network	Lawrence W. Yonge III Srinivas Katar Manjunath Krishnam	020719/0281 024103/0834 024103/0872 026596/0214
6221-06700	ATH-0563	6/4/2008	12/133,312	In-Home Coexistence Network	Lawrence W. Yonge III Srinivas Katar	021920/0163 024103/0834 024103/0872 026596/0214
6221-06800	ATH-0564	6/4/2008	12/133,325	Managing Communications Over a Shared Medium	Lawrence W. Yonge III Srinivas Katar Richard E. Newman	021979/0411 024103/0834 024103/0872 026596/0214
6221-06900	ATH-0565	1/9/2008	11/971,446	Network Encryption Key Rotation	Srinivas Katar Lawrence W. Yonge, III Manjunath (Anandarama) Krishnam	020719/0224 024103/0834 024103/0872 026596/0214
6221-07000	ATH-0566	1/7/2008	11/970,339	Establishing a Unique End-to-End Management Key	Srinivas Katar Lawrence W. Yonge, III Manjunath Krishnam	020719/0317 024103/0834 024103/0872 026596/0214
6221-07100	ATH-0567	7/20/2009	12/505,773	Channel Reuse in Communication Systems	Lawrence W. Yonge, III Srinivas Katar Manjunath Krishnam	023257/0580 024103/0834 024103/0872 026596/0214
6221-07200	ATH-0568(PRV)	4/9/2008	61/043,581	Transmission Line Directional Coupling (Provisional)	James (Gerard) Zyren	022543/0665 024103/0834 024103/0872 026596/0214
6221-07201	ATH-0568	4/9/2009	12/421,543	Transmission Line Directional Coupling	James (Gerard) Zyren	022543/0665 024103/0834 024103/0872 026596/0214
6221-07300	ATH-0569(PRV)	5/30/2008	61/057,794	Communicating Over Power Distribution Media (Provisional)	James (Gerard) Zyren	022754/0173 024103/0834 024103/0872 026596/0214
6221-07301	ATH-0569	5/28/2009	12/473,456	Communicating Over Power Distribution Media	James (Gerard) Zyren	022754/0173 024103/0834 024103/0872 026596/0214

6221-07400	ATH-0570(PRV)	6/16/2008	61/073,024	Managing Coexistence Among Signaling Protocols on a Shared Medium (Provisional)	Lawrence W. Yonge III Srinivas Katar William E. Earnshaw Jose Abad Molina Stefano Galli Akio Kurobe Oleg Logvinov	026552/0026 023624/0114 023624/0035 023624/0047 023624/0044 023943/0762 024103/0834 024103/0872 025381/0227 025584/0948 025586/0098 025585/0759 026124/0953 026550/0051 026596/0214
6221-07401	ATH-0570F1	6/16/2009	PCT/US2009/047530	Managing Coexistence Among Signaling Protocols on a Shared Medium	Lawrence W. Yonge III Srinivas Katar William E. Earnshaw Stefano Galli Akio Kurobe Hisao Koga Nobutaka Kodama Jose Abad Molina Oleg Logvinov Paul Dixon Olivier Isson	026552/0026 023624/0114 023624/0035 023624/0047 023624/0044 023943/0762 024103/0834 024103/0872 025381/0227 025584/0948 025586/0098 025585/0759 026124/0953 026550/0051 026596/0214
6221-07401	ATH-0570	6/16/2009	12/485,468	Managing Coexistence Among Signaling Protocols on a Shared Medium	Lawrence W. Yonge III Srinivas Katar William E. Earnshaw Stefano Galli Akio Kurobe Hisao Koga Nobutaka Kodama Jose Abad Molina Oleg Logvinov Paul Dixon Olivier Isson	026552/0026 023624/0114 023624/0035 023624/0047 023624/0044 023943/0762 024103/0834 024103/0872 025381/0227 025584/0948 025586/0098 025585/0759 026124/0953 026550/0051 026596/0214
6221-07500	ATH-0571(PRV)	11/14/2008	61/114,845	Transmission Suppression for Full-Duplex Communication (Provisional)	Lawrence W. Yonge III Arun Avudainayagam Timothy J. VanderMey	023511/0638 024103/0834 024103/0872 026596/0214
6221-07501	ATH-0571	11/12/2009	12/617,032	Transmission Suppression	Lawrence W. Yonge III Arun Avudainayagam Timothy J. VanderMey	023511/0638 024103/0834 024103/0872 026596/0214
6221-07502	ATH-0571F1	11/12/2009	PCT/US2009/064134	Transmission Suppression	Lawrence W. Yonge III Arun Avudainayagam Timothy J. VanderMey	023511/0638 024103/0834 024103/0872 026596/0214
6221-07600	ATH-0572(PRV)	12/31/2008	61/141,978	Efficient Communication Over a Shared Medium (Provisional)	Srinivas Katar Lawrence W Yonge	024736/0617 026596/0214

6221-07601	ATH-0572	12/23/2009	12/645,561	Efficient Communication Over a Shared Medium	Srinivas Katar Lawrence W Yonge	024736/0617 026596/0214
6221-07700	ATH-0573(PRV)	12/21/2008	61/141,984	Dynamic Management of Shared Transmission Opportunities (Provisional)	Lawrence W Yonge Srinivas Katar	024141/0791 026596/0214
6221-07701	ATH-0573	12/23/2009	12/645,574	Dynamic Management of Shared Transmission Opportunities	Lawrence W Yonge Srinivas Katar	024141/0791 026596/0214
6221-07800	ATH-0574(PRV)	4/1/2009	61/165,879	Managing Transmissions Among Nodes Communicating Over A Shared Communication Medium	Sidney Brower Schrum JR. Lawrence W. Yonge III Srinivas Katar Manjunath Krishnam	024175/0651 026596/0214
6221-07801	ATH-0574	4/1/2010	12/752,508	Managing Transmissions Among Nodes Communicating Over A Shared Communication Medium	Srinivas Katar Sidney Brower Schrum JR. Lawrence W. Yonge III Manjunath Krishnam	024175/0651 026596/0214
6221-07802	ATH-0574F1	4/1/2010	PCT/US2010/029601	Managing Transmissions Among Nodes Communicating Over A Shared Communication Medium	Srinivas Katar Sidney Brower Schrum JR. Lawrence W. Yonge III Manjunath Krishnam	024175/0651 026596/0214
6221-07900	ATH-0575	4/9/2009	12/421,452	Transmission Line Directional Awareness	James (Gerard) Zyren	022543/0768 024103/0834 024103/0872 026596/0214
6221-07901	ATH-0575F1	4/9/2009	PCT/US2009/040078	Transmission Line Directional Awareness	James (Gerard) Zyren	022543/0768 024103/0834 024103/0872 026596/0214
6221-07903	ATH-0575-1P	6/23/2010	12/821,903	Transmission Line Directional Awareness (Continuation-in-Part)	James (Gerard) Zyren	024766/0332 026596/0214
6221-07904	ATH-0575-1PF1	6/23/2010	PCT/US2010/039615	Transmission Line Directional Awareness	James (Gerard) Zyren	024766/0332 026596/0214
6221-08000	ATH-0576(PRV)	6/23/2009	61/219,661	Transmission Line Directional Awareness (Provisional)	James (Gerard) Zyren	024766/0332 026596/0214
6221-08100	ATH-0577(PRV)	7/7/2009	61/223,582	Managing Power Consumption in Network Communications (Provisional)	Bruce A. Denton Anthony Cowan David L. Harding	024648/0423 026596/0214
6221-08101	ATH-0577	7/7/2010	12/831,563	Managing Power Consumption in Network Communications	Bruce A. Denton Anthony Cowan David L. Harding	024648/0423 026596/0214
6221-08200	ATH-0578(PRV)	7/23/2009	61/228,073	Managing Power Consumption By Communications Devices In A Network (Provisional)	Anthony Cowan Bruce A. Denton William E. Earnshaw David Johnson	
6221-08300	ATH-0579(PRV)	8/19/2009	61/235,338	Hybrid Modulation Schemes Used in Data Communication (Provisional)	Lawrence W Yonge Harper Brent Mashburn Srinivas Katar	024979/0679 026596/0214
6221-08301	ATH-0579	8/19/2010	12/806,805	Hybrid Modulation Schemes Used in Data Communication	Lawrence W Yonge Harper Brent Mashburn Srinivas Katar	024979/0679 026596/0214
6221-08400	ATH-0580(PRV)	1/8/2010	61/293,585	Communicating Between Network Nodes (Provisional)	Lawrence W. Yonge Srinivas Katar	025710/0183 026596/0214

6221-08401	ATH-0580	12/28/2010	12/979,780	Communicating Between Network Nodes	Lawrence W. Yonge Srinivas Katar	025710/0183 026596/0214
6221-09400	ATH-0512	9/11/2001	6,289,000	Frame Control Encoder/Decoder for Robust OFDM Frame Transmissions	Lawrence W. Yonge III	011100/0303 014532/0655 024103/0834 024103/0872 026596/0214
6221-09500	ATH-0523	6/26/2002	10/180,176	Powerline Network Bridging Congestion Control	Stanley J. Kostoff II Brian E. Markwalter William E. Earnshaw James Philip Patella	013434/0230 014532/0655 024103/0834 024103/0872 026596/0214
6221-09700	ATH-0515	8/4/2000	09/632,310	Logical Network Separation and Privacy Using Encryption	Stanley J. Kostoff II Brian E. Markwalter	011318/0557 024103/0834 024103/0872 026596/0214